

## CLAIMS

What is claimed is:

1. A method for providing and configuring communication links, the method comprising:

determining any one usable media pair from all existing media pairs;

selecting any one channel from all existing channels; and

assigning said selected any one channel to said any one media pair.

2. The method according to claim 1, wherein said determining further comprises monitoring at least said any one usable media pair.

3. The method according to claim 2, wherein said monitoring further comprises detecting an existence of a communication signal on said any one usable media pair.

4. The method according to claim 1, further comprising determining which one of said all existing media pairs is capable of facilitating communication at a maximum communication speed.

5. The method according to claim 4, further comprising cross-connecting said selected any one channel to said one of said all existing media pairs capable of facilitating communication at a maximum communication speed.

6. The method according to claim 1, further comprising determining which one of said all existing media pairs is capable of operating at a reduced communication speed.

7. The method according to claim 6, further comprising cross-connecting said selected any one channel to said one of said all existing media pairs capable of operating at said reduced communication speed.

8. The method according to claim 1, further comprising:  
flipping at least one of a channel and a media pair assignment of a previously defined general channel and media pair configuration which defines channel and media pair assignments for at least a portion of said all existing media pairs; and  
defining said flipped at least one said channel and said media pair assignment as a default channel and media pair configuration.

9. The method according to claim 1, further comprising identifying a status of at least one of said all existing media pairs and at least one of said all existing channels.

10. The method according to claim 9, further comprising storing said identified status.

11. A machine-readable storage having stored thereon, a computer program having at least one code section for providing and configuring communication links, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

determining any one usable media pair from all existing media pairs;  
selecting any one channel from all existing channels; and  
assigning said selected any one channel to said any one media pair.

12. The machine-readable storage according to claim 11, further comprising code for monitoring at least said any one usable media pair.

13. The machine-readable storage according to claim 12, further comprising code for detecting an existence of a communication signal on said any one usable media pair.

14. The machine-readable storage according to claim 11, further comprising code for determining which one of said all existing media pairs is capable of facilitating communication at a maximum communication speed.

15. The machine-readable storage according to claim 14, further comprising code for cross-connecting said selected any one channel to said one of said all existing media pairs capable of facilitating communication at a maximum communication speed.

16. The machine-readable storage according to claim 11, further comprising code for determining which one of said all existing media pairs is capable of operating at a reduced communication speed.

17. The machine-readable storage according to claim 16, further comprising code for cross-connecting said selected any one channel to said one of said all existing media pairs capable of operating at said reduced communication speed.

18. The machine-readable storage according to claim 11, further comprising:  
flipping at least one of a channel and a media pair assignment of a previously defined general channel and media pair configuration which defines channel and media pair assignments for at least a portion of said all existing media pairs; and

defining said flipped at least one said channel and said media pair assignment as a default channel and media pair configuration.

19. The machine-readable storage according to claim 11, further comprising code for identifying a status of at least one of said all existing media pairs and at least one of said all existing channels.

20. The machine-readable storage according to claim 19, further comprising code for storing said identified status.

21. A system for providing and configuring communication links, the system comprising:

at least one controller adapted to determine any one usable media pair from all existing media pairs;

at least one selector adapted to select any one channel from all existing channels; and

said at least one controller adapted to assign said selected any one channel to said any one media pair.

22. The system according to claim 21, wherein said at least one controller is further adapted to determine at least said any one usable media pair.

23. The system according to claim 22, wherein said at least one controller further comprises a detector adapted to detect an existence of a communication signal on said any one usable media pair.

24. The system according to claim 21, wherein said at least one controller is further adapted to determine which one of said all existing media pairs is capable of facilitating communication at a maximum communication speed.

25. The system according to claim 24, wherein said selector is further adapted to cross-connect said selected any one channel to said one of said all existing media pairs capable of facilitating communication at a maximum communication speed.

26. The method according to claim 21, wherein said at least one controller is further adapted to determine which one of said all existing media pairs is capable of operating at a reduced communication speed.

27. The system according to claim 26, wherein said selector is further adapted to cross-connect said selected any one channel to said one of said all existing media pairs capable of operating at said reduced communication speed.

28. The system according to claim 21, wherein  
said selector is further adapted to flip at least one of a channel and a media pair assignment of a previously defined general channel and media pair configuration which defines channel and media pair assignments for at least a portion of said all existing media pairs; and

said controller is further adapted to define said flipped at least one said channel and said media pair assignment as a default channel and media pair configuration.

29. The system according to claim 21, wherein said at least one controller is further adapted to identify a status of at least one of said all existing media pairs and at least one of said all existing channels.

30. The system according to claim 29, further comprising at least one register adapted to store said identified status.